

WHAT IS CLAIMED IS:

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1. A method for identifying objects within a set of objects, the method comprising the steps of:
transmitting a signal toward a region of interest;
receiving energy reflected from said region of interest;
establishing a baseline field strength for said received reflected energy;
determining at least one frequency at which said field strength substantially differs from said baseline field strength for said received reflected energy; and
identifying at least one object within said region of interest based upon said determined at least one frequency.
2. The method of claim 1 wherein said identifying step comprises the steps of:
establishing a plurality of pre-selected frequencies within a frequency range of said transmitted signal; and
associating at least one of said pre-selected frequencies with each object of said set of objects.
3. The method of claim 1 wherein said transmitted signal is an electromagnetic signal.
4. The method of claim 1 wherein said transmitted signal is sonic.
5. The method of claim 1 wherein said transmitted signal is ultrasonic.
6. The method of claim 1 further comprising the step of:
affixing at least one antenna to each object of said set of objects.

7. The method of claim 6 further comprising the step of:
causing each of said at least one affixed antenna to resonate at a pre-selected frequency.
8. The method of claim 6 further comprising the step of:
causing each of said at least one affixed antennae to resonate at a different pre-selected frequency.
9. The method of claim 1 wherein said step of transmitting said signal comprises the step of:
transmitting a broadband signal spanning a plurality of resonant frequencies
and wherein said determining step comprises the step of:
determining which of said plurality of resonant frequencies has a field strength which differs substantially from said baseline field strength
10. The method of claim 1 wherein said step of transmitting said signal comprises the step of:
transmitting a narrowband signal spanning a single preselected resonant frequency
and wherein said determining step comprises the step of:
determining whether a field strength of said single preselected resonant frequency differs substantially from said baseline field strength for said reflected energy.

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11. An object presence detection system, the system comprising:
at least one region of interest;
object detection equipment disposed conveniently to said at least one region of
interest;
5 a set of objects for detection by said object detection equipment; and
at least one antenna disposed on each object of said set of objects for uniquely
identifying each said object of said set of objects to said object detection equipment.

12. The system of claim 11 wherein each antenna of said at least one antennae
resonates at a different pre-selected frequency.

13. The system of claim 11 wherein each said antenna of said at least one antennae
has a different length.

14. The system of claim 11 further comprising:
a data table, accessible to said object detection equipment, for associating each said
object of said set of objects with a unique pre-selected resonant frequency.

15. The system of claim 11 wherein said object detection equipment comprises:
at least one transmitter.

16. The system of claim 15 wherein said at least one transmitter is a radio
frequency transmitter.

17. The system of claim 11 wherein said object detection equipment comprises:
at least one receiver.

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~~18. The system of claim 17 wherein said at least one receiver is a radio frequency receiver.~~

~~19. The system of claim 17 wherein said object detection equipment further comprises:~~

~~analyzing circuitry, coupled to said at least one receiver, for identifying resonant frequencies present in said region of interest.~~

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20. A system for detecting object presence, the system comprising:
means for transmitting RF (radio frequency) energy towards objects in a region of
interest;
means for receiving RF energy from said objects in said region of interest;
5 means for generating at least one resonant frequency to represent an object population
in said region of interest;
means for altering said received RF energy with said generated at least one resonant
frequency; and
means for analyzing said altered received RF energy.

21. The system of claim 20 further comprising:
means for identifying said object population based on said analyzed altered received
RF energy.

22. The system of claim 20 wherein said means for generating comprises:
at least one distinctively dimensioned antenna on each object of said object
population.

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